

Work Order ID 161778

Tuesday, May 23, 2017 9:40:59 AM

161778

Page 1

Item ID: 647.1701

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Skid Deflector Assembly

Start Date: 5/30/2017 Start Qty: 8.00 *8*

Cust Item ID:

Required Date: 6/9/2017 Req'd Qty: 8.00 *8*

Customer:

Reference:

Approvals: Process Plan: DAS 21 Date: MAY 23 2017 Tooling: _____ Date: _____
QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
647.1700	E

110 Pick Kit 0.00

110

Packaging Memo 0.00

Packaging

DAS 6 JUN 20 2017
9-89

120 0.00

120

Small Fab Memo 15.51

Small Fab

1- Assemble item 4,6,7 and 8 as per dwg.

2- Clamp item 1 and 2 to item 3. Transfer drill holes as per dwg see note 6. Use clecos.

3- Disassemble parts

4- Deburr

5- Touch up expose aluminum with alodine

6- Re-assemble as per dwg

8X 17/06/21
DAS 36 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

161778

Page 2

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: Skid Deflector Assembly

Start Date: 5/30/2017 **Start Qty:** 8.00 ***8***

Cust Item ID:

Required Date: 6/9/2017 **Req'd Qty:** 8.00 ***Q***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	OTHER : _____							
Misidentified	☐	Past Due								

Work Order ID 161778

Tuesday, May 23, 2017 9:40:59 AM

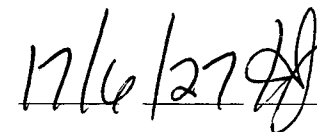
161778

Page 3

Item ID: 647.1701 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Skid Deflector Assembly
Start Date: 5/30/2017 Start Qty: 8.00 ***8*** Cust Item ID:
Required Date: 6/9/2017 Req'd Qty: 8.00 ***8*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	Identify as per dwg & Stock Location: <u>CCK044</u>	0.00				8		JUN 23 2017	
210									
Packaging	Memo	0.08							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	Memo	0.80							
Quality Control									

17/6/27 

 JUN 23 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

Picklist Print

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Page 1

Work Order ID: 161778

161778

Parent Item: 647.1701

647 1701

Parent Item Name: Skid Deflector Assembly

Start Date: 5/30/2017

Required Date: 6/9/2017

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 12.10.04 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
647.1710 *647 1710* Plate		Manufactured	No			110	Each	5.0000	1	8			
										**	(617284)	DAS 6 9-89	JUN 20 2017
						<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
						CCK044	5						
						136175	1						
						145476	4						
647.1711 *647 1711* Plate		Manufactured	No			110	Each	11.0000	1	8			
										**		DAS 6 9-89	JUN 20 2017
						<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
						CCK044	11						
						136263	1						
						145348	10						
647.1712 *647 1712* Gusset		Manufactured	No			110	Each	1.0000	1	8			
										**	109859x7	DAS 6 9-89	JUN 20 2017
						<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
						CCK031	1						
						153320	1						
647.1713 *647 1713* Spacer		Manufactured	No			110	Each	27.0000	1	8			
										**		DAS 6 9-89	JUN 20 2017
						<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
						CCK108	27						
						154826	27						

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
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Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Tuesday, May 23, 2017 9:40:58 AM

Page 2

Work Order ID: 161778

161778

Parent Item: 647.1701

647 1701

Parent Item Name: Skid Deflector Assembly

Start Date: 5/30/2017

Required Date: 6/9/2017

Start Qty: 8.00

Required Qty: 8.00

CR3213-4-4 Purchased No

110 Each 322.0000 22 176

CR3213-4-4

Rivet, Cherry

**

DAS
6

7-89

JUN 2 0 2017

Location

Loc Qty

Loc Code

CCK003

200

m137391

200

ST319

122

m136301

122

176

JUN 2 0 2017

NAS1149F0332P Purchased No

110 Each 2,196.0000 2 16

NAS1149F0332P

Washer

**

DAS
6

9-89

Location

Loc Qty

Loc Code

GA

275

m133709

275

ST262

1921

m137075

121

m137412

1800

16

JUN 2 0 2017

MS21042-3 MS21042L3 Purchased No

110 Each 0.0000 1 8

MS21042-3

Nut

**

DAS
6

9-89

137680

MS27039-1-14 Purchased No

110 Each 628.0000 1 8

MS27039-1-14

Screw

**

DAS
6

9-89

JUN 2 0 2017

Location

Loc Qty

Loc Code

GA

90

120449

90

over006

300

124326

300

ST280

238

124326

238

8

Tuesday, May 23, 2017 9:40:58 AM

Shop Packet Print

Page 2

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : ☐			
Misidentified ☐		Past Due ☐					

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NOTES:

1 MATERIAL: 7075-T6 ALUMINUM PER AMS-QQ-A-250/12.

2 MATERIAL: 6061-T6 ALUMINUM BAR IAW AMS-QQ-A-250/11.

3 FINISH IAW MPP-172, SECTIONS 2.1, 3.1, & 4.2.

4. DEBURR AND BREAK ALL SHARP EDGES.

5. IDENTIFY IAW MPP-120.

6 P/N 647.1701:
CLAMP F/N 1, 2, & 4; THEN MATE AND MATCH DRILL HOLES FROM F/N 1 & 2 ONTO F/N 3 AS SHOWN ON SHEET 2.

P/N 647.1702:
FOLLOW SAME PROCEDURE FOR P/N 647.1702 USING F/N 9 & 10 IN PLACE OF 1 & 2.

P/N 647.1703:
FOLLOW SAME PROCEDURE FOR P/N 647.1703 USING F/N 11, 12, & 13 IN PLACE OF F/N 1, 2, & 3, RESPECTIVELY.

7 WITH EXCEPTION OF HOLE DIMENSION, ALL DIMENSIONS SAME AS P/N 647.1710 AND P/N 647.1711, RESPECTIVELY.

8 FOR P/N 647.1701 ASSEMBLY.

9 FOR P/N 647.1702 ASSEMBLY.

10 .323" DIA FOR P/N'S 647.1714 & 647.1715
.257" DIA FOR P/N'S 647.1710 & 647.1711

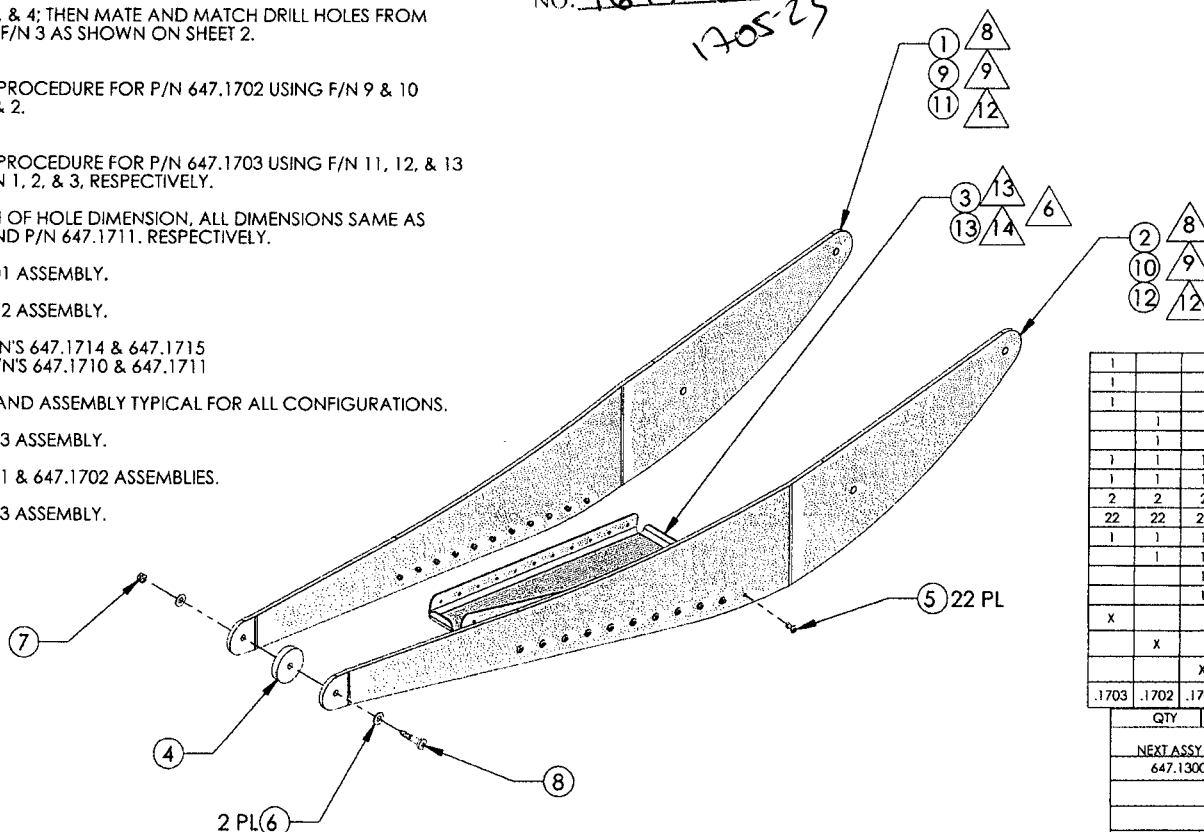
11 RIVET SPACING AND ASSEMBLY TYPICAL FOR ALL CONFIGURATIONS.

12 FOR P/N 647.1703 ASSEMBLY.

13 FOR P/N 647.1701 & 647.1702 ASSEMBLIES.

14 FOR P/N 647.1703 ASSEMBLY.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 161778 MJS
1705-23



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION: PR2		N/C
N/C	INITIAL RELEASE	08/05/09	P. BRAVO
A	INCORPORATED ECN'S 02937 & 03921	06/07/13	P. BRAVO
B	INCORPORATED ECN 03970	07/03/13	P. BRAVO
C	INCORPORATED ECN 04058	08/14/13	P. BRAVO
D	INCORPORATED ECN'S 04679, 04702 & 04964	05/29/15	P. BRAVO
E	INCORPORATED ECN 05352	03/21/16	P. BRAVO

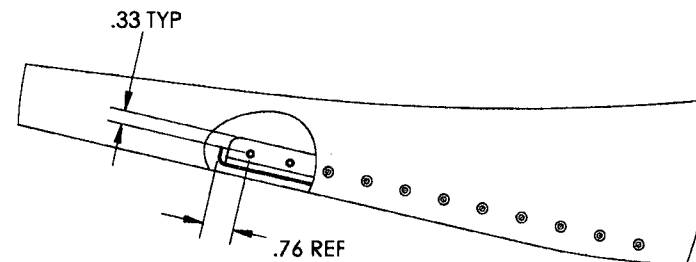
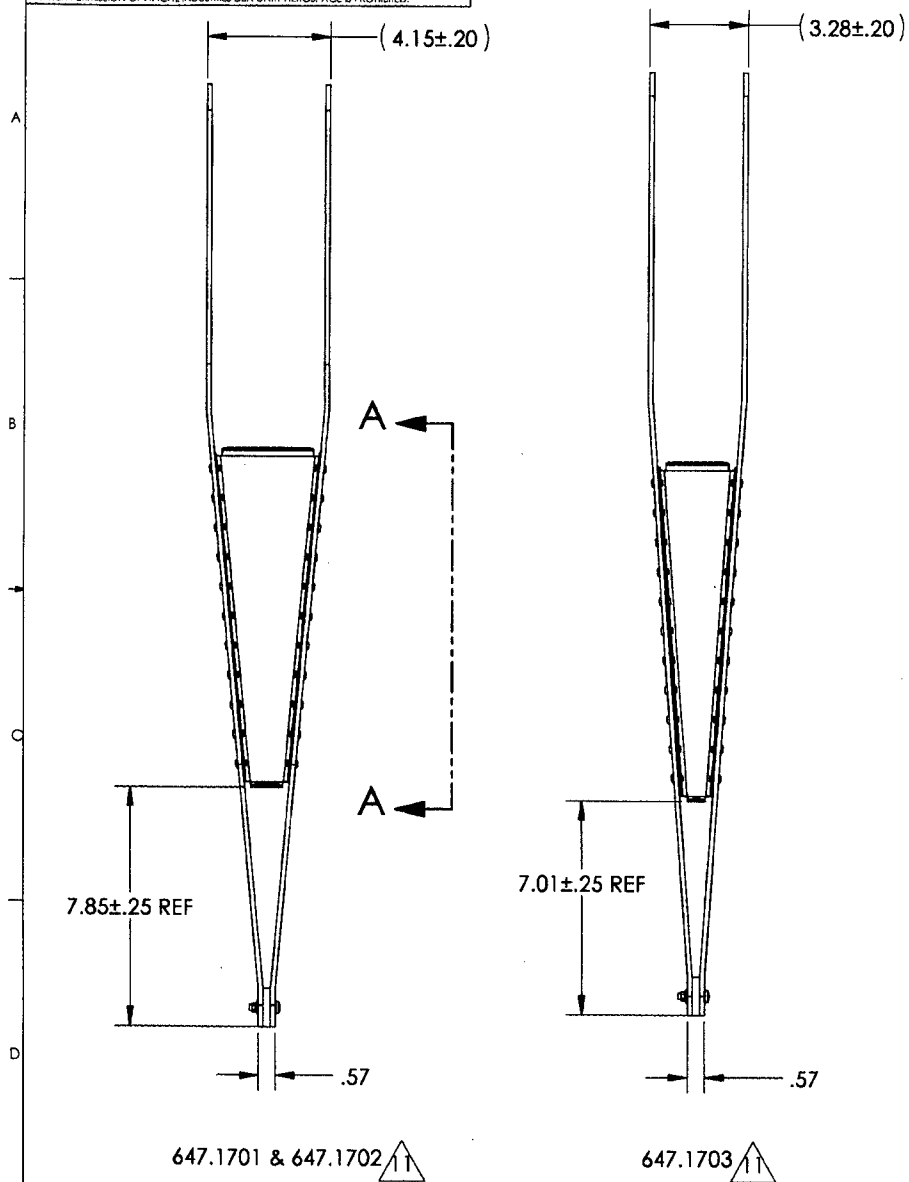
1		13	647.1718	GUSSET		
1		12	647.1717	PLATE		
1		11	647.1716	PLATE		
1		10	647.1715	PLATE		
1		9	647.1714	PLATE		
1	1	8	601.1622	SCREW	MS27039-1-14	
1	1	7	601.2943	LOCKNUT	MS21042-3	
2	2	6	601.1607	WASHER	NAS1149F0332P	
22	22	5	601.1915	RIVET	CR3213-4-4	
1	1	4	647.1713	SPACER		
1	1	3	647.1712	GUSSET		
	1	2	647.1711	PLATE		
	1	1	647.1710	PLATE		
X			647.1703	SKID DEFLECTOR ASSY		
X			647.1702	SKID DEFLECTOR ASSY		
	X		647.1701	SKID DEFLECTOR ASSY		
.1703	.1702	.1701	FIND #	DESCRIPTION	MATL	SPEC.

QTY		PARTS LIST	
NEXT ASSY (S)		ORIGINAL DATE	
647.1300		08/05/09	
		DRAWN BY: KILGEE	
		S. HUFF	
		P. BRAVO	
		DRAWING APPROVAL	
		P. BRAVO	
		CONTRACT NO.	
		UNLESS OTHERWISE SPECIFIED	
		DIMENSIONS ARE IN INCHES	
		TOLERANCES ARE:	
		2 PLACE DECIMALS ± .01	
		3 PLACE DECIMALS ± .005	
		ANGLES ± .5°	
SSE	CAUSE CODE	DWG. NO.	REV.
B	07/M26	647.1700	E
SCALE: NONE		SHEET 1 OF 7	

DART 3030 ENTERPRISE CT.,
SUITE A
VISTA, CA 92081
APICAL INDUSTRIES, INC.
DBA DART AEROSPACE
17601-724-5300

SKID DEFLECTOR ASSY

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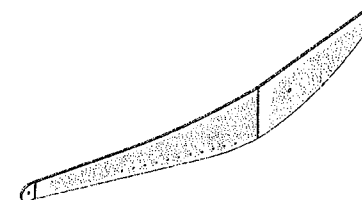
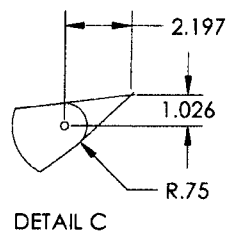
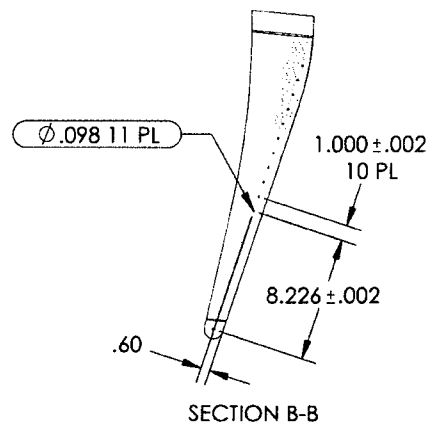
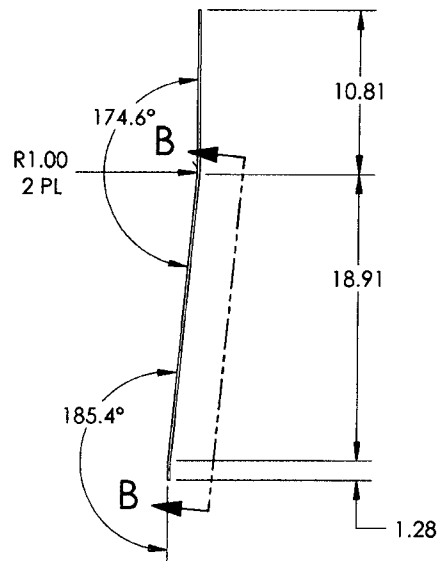


SECTION AA
TYP ALL CONFIGURATIONS

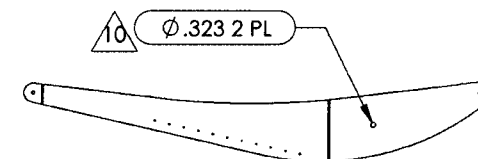
ORIGINAL DATE (MM-DD-YY) 08-05-09		3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY S. HUP J. BRAY		DART AEROSPACE	
DRAWING APPROVAL P. BRAY 08/05/09		APICAL INDUSTRIES INC. DBA DART AEROSPACE	
CONTRACT No.		SKID DEFLECTOR ASSY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°			
SIZE B	CAGE CODE 07M26	DWG. NO. 647.1700	REV. E
SCALE NONE		SHEET 2 OF 7	

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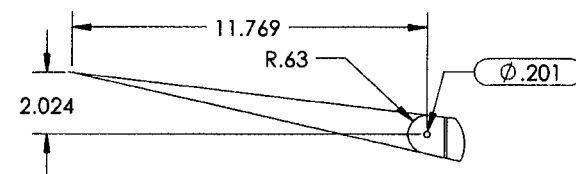
A
B
C
D



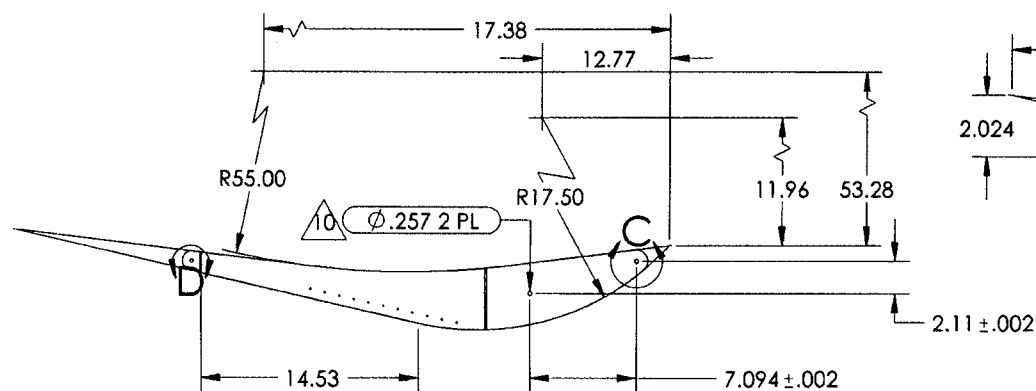
647.1711 SHOWN
647.1710 OPPOSITE



647.1714 SHOWN
647.1715 OPPOSITE 7



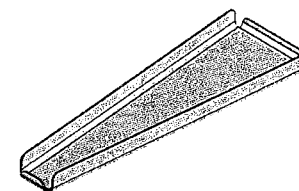
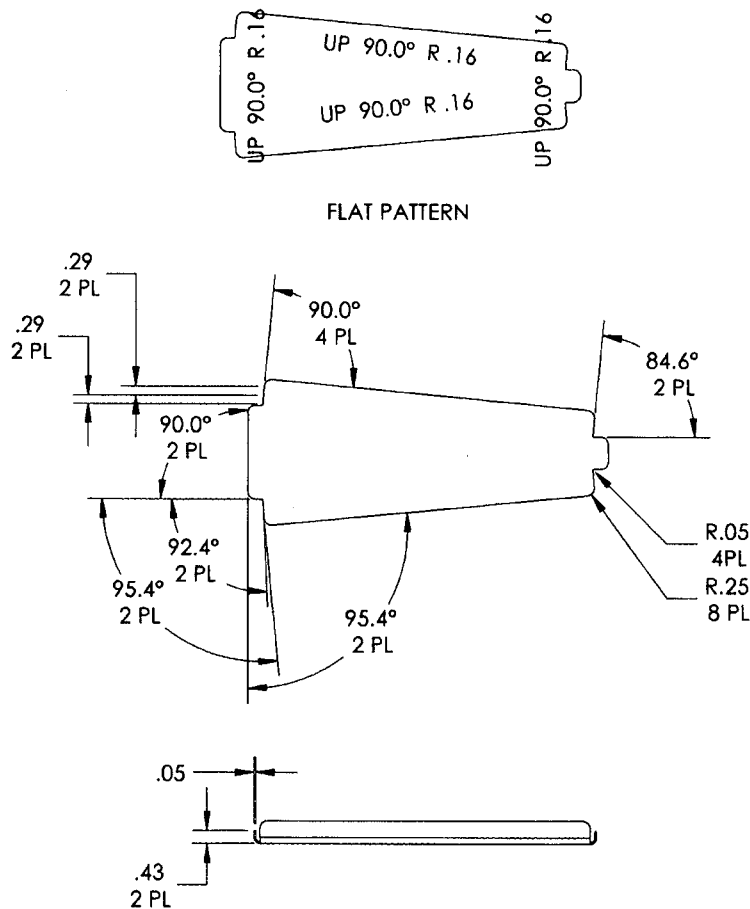
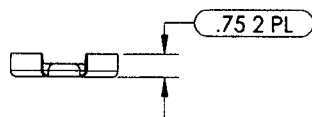
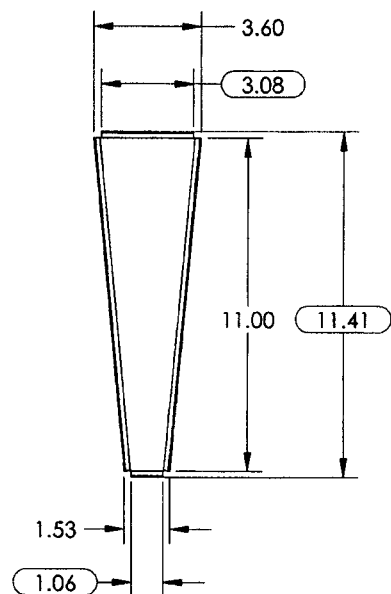
DETAIL D



ORIGINAL DATE 08-25-09	3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760)-724-5300
DRAWN BY P. BRAVO	DART AEROSPACE
CHECKED BY P. BRAVO	APICAL INDUSTRIES INC. DBA DART AEROSPACE
DRAWING APPROVAL P. BRAVO	SKID DEFLECTOR ASSY
CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .005$ ANGLES $\pm .5^\circ$	REV. E
SCALE NONE	SHEET 3 OF 7

1 2 3 4 5 6 7 8

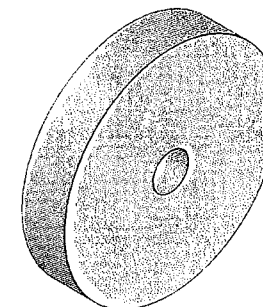
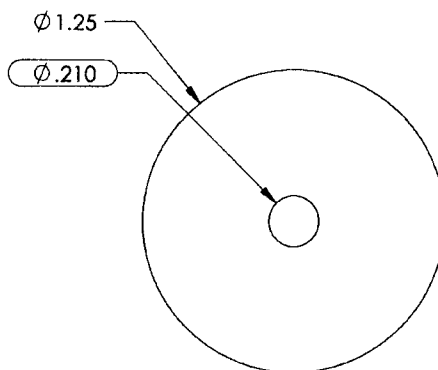
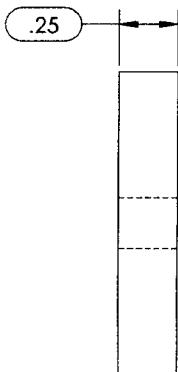
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647.1712

ORIGINAL DATE 11-01-09		3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY S. HUFF	CHECKED P. BRAVO	DART AEROSPACE APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
DRAWING APPROVAL P. BRAVO	DATE 08-01-09	SKID DEFLECTOR ASSY	
CONTRACT NO.		SCALE NONE	SHEET 4 OF 7
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS 1.01 3 PLACE DECIMALS 1.005 ANGLES ± .5°		REV. B 07/12/06 647.1700 E	

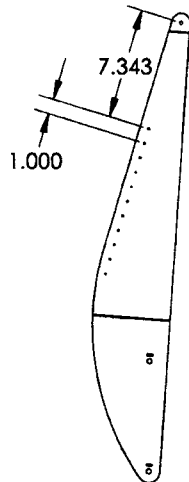
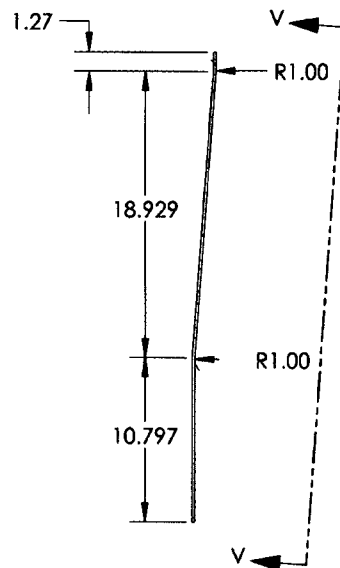
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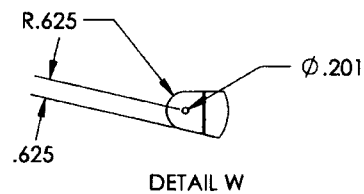
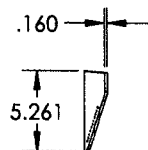
647.1713

ORIGINAL DATE 08-25-07		3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY L. HUFF		CHECKED P. BRAVO	
DRAWING APPROVAL P. BRAVO		APICAL INDUSTRIES, INC. (DBA DART AEROSPACE)	
CONTRACT NO.		SKID DEFLECTOR ASSY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .005$ ANGLES $\pm .5^\circ$		SIZE B	REV. E
CAGE CODE 071426		DWG. NO. 647.1700	
SCALE NONE		SHEET 5 OF 7	

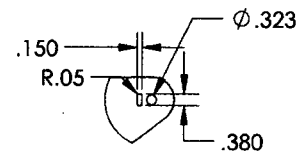
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VIEW V-V

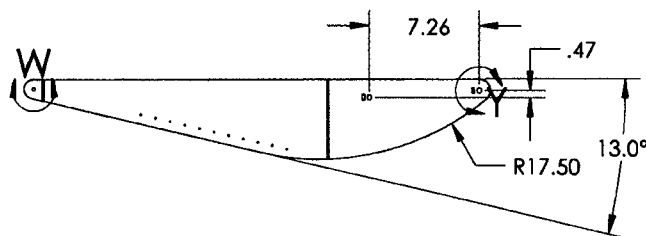


DETAIL W



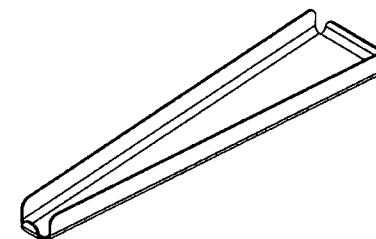
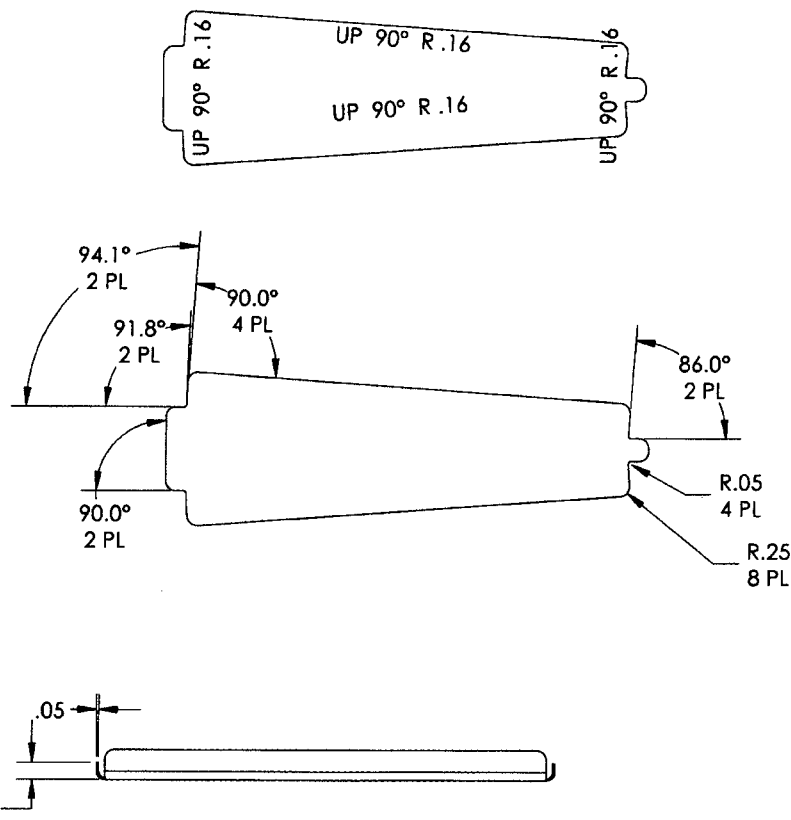
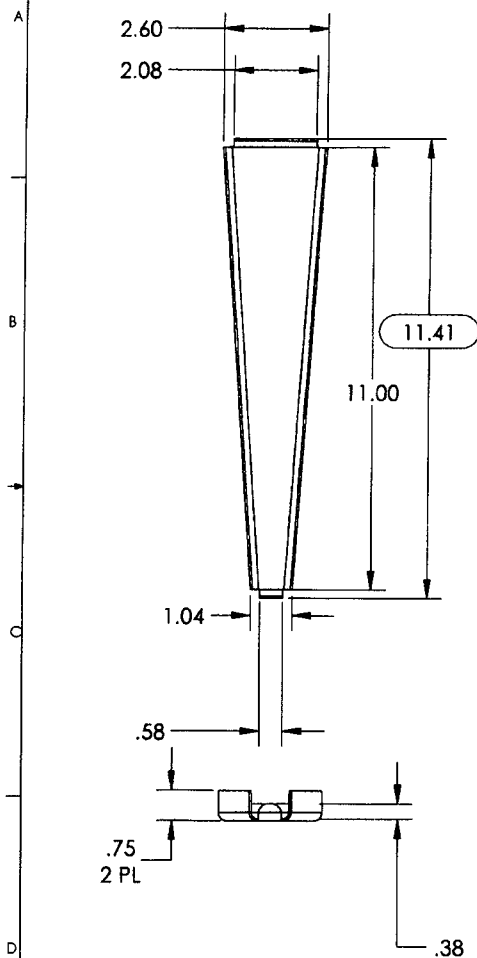
DETAIL Y
TYP 2 PL

647.1716 SHOWN
647.1717 OPPOSITE



ORIGINAL DATE (MM-DD-YY) 08-05-09		3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY J. HUFF	CHECKED P. DIAVO	DART AEROSPACE APICAL INDUSTRIES INC. DBA DART AEROSPACE	
DRAWING APPROVAL P. DIAVO	DESIGN P. DIAVO		
CONTRACT NO.		SKID DEFLECTOR ASSY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		REV B	CAGE CODE 07M16 DWG. NO. 647.1700 SCALE NONE
		REV E	SHEET 6 OF 7

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647.1718

ORIGINAL DATE (MM-DD-YY) 08-05-09		3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY S. RUPE	CHECKER P. BRAVO	APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
DRAWING APPROVAL P. BRAVO 08/05/09		CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°			
SRE B	CAGE CODE 07MA26	DWG. NO. 647.1700	REV. E
SCALE NONE			SHEET 7 OF 7